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## What Is Moral About Guilt? Acting “Prosocially” at the Disadvantage of Others

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For centuries economists and psychologists have argued that the morality of moral emotions lies in the fact that they stimulate prosocial behavior and benefit others in a person's social environment. Many studies have shown that guilt, arguably the most exemplary moral emotion, indeed motivates prosocial behavior in dyadic social dilemma situations. When multiple persons are involved, however, the moral and prosocial nature of this emotion can be questioned. The present article shows how guilt can have beneficial effects for the victim of one's actions but also disadvantageous effects for other people in the social environment. A series of experiments, with various emotion inductions and dependent measures, all reveal that guilt motivates prosocial behavior toward the victim at the expense of others around—but not at the expense of oneself. These findings illustrate that a thorough understanding of the functioning of emotions is necessary to understand their moral nature.

**Keywords:** moral emotions, guilt, interpersonal relationships, prosocial behavior, social dilemmas

As a moral emotion, guilt has been portrayed as the social mortar of human societies (Frank, 1988; A. Smith, 1759). Although guilt is an unpleasant emotion, it has been argued to have beneficial consequences because it makes individuals put the concerns of others above their own (Haidt, 2003). Ample empirical research has demonstrated the positive effects of guilt for interpersonal relationships and society (see e.g., Baumeister, Stillwell, & Heatherton, 1994; Freedman, Wallington, & Bless, 1967; Ketselaar & Au, 2003). Given this adaptive nature, guilt is portrayed as the “good emotion” (Leith & Baumeister, 1998; Tangney, 1999; Wong & Tsai, 2007). In the present article, however, we reveal that there is a negative interpersonal side to guilt as well. Our experiments demonstrate that guilt motivates compensatory behaviors toward the people to whom a person feels guilty but that this occurs at the expense of others in the social environment. We argue that these consequences are part and parcel of the experience and function of guilt.

### Guilt as a Moral Emotion

At the beginning of the 20th century, guilt was mostly understood as a negative feeling resulting from intrapsychic, moral

conflicts. In Freud's view, for example, guilt feelings resulted from a conflict between the superego and the id. As the superego reflected an adaptation of the human organism to civilization (Freud, 1930/1961), guilt could be interpreted as a moral sense ensuing from conflicts when living with other people. Consequently, the focus of theories on guilt lay at its negative *intrapersonal* effects such as melancholia, obsessional neuroses, and masochism (Freud, 1917/1957, 1923/1961). In later years, the focus of theories and empirical research shifted toward its positive *interpersonal* effects.

After almost 50 years of empirical interpersonal research, the present image of guilt is one of an “adaptive emotion, benefiting individuals and their relationships in a variety of ways” (Tangney, Stuewig, & Mashek, 2007, p. 26). Its function is to protect and enhance social relationships by punishing interpersonal wrongdoings and restoring inequities (Baumeister et al., 1994; Leith & Baumeister, 1998). Guilt arises from a moral transgression in which the actor appraises the situation as having violated an important norm and having hurt another person (Ortony, Clore, & Collins, 1988; Tangney & Dearing, 2002). This appraisal elicits feelings of tension and remorse as well as a preoccupation with the transgression itself (what was done) and with the victim thereof (who was harmed; Lewis, 1987; Tangney, 1999). The ensuing reparative action tendencies such as confessions, apologies, and attempts to undo the harm done are aimed at restoring the relationship between transgressor and victim (Caplovitz Barrett, 1995; Lewis, 1971, 1987; Lindsay-Hartz, 1984). In the words of Izard (1977, p. 422, emphasis added): “The experience of guilt *binds the person to the source of guilt* and does not subside without reconciliation that tends to restore social harmony.”

Even economists, who traditionally tend to adhere to a self-interested view of man, acknowledge that guilt curbs selfish tendencies and spurs prosocial action (Miettinen & Suetens, 2008; A. Smith, 1759), which eventually yields an even more profitable

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long-term strategy (Frank, 1988). This action reflects prosocial behavior, in the sense that it displays “helping another person at some sacrifice to oneself” (Penner, Dovidio, Piliavin, & Schroeder, 2005, p. 369). More generally, the behavior following guilt is mostly interpreted as moral behavior, or behavior motivated out of concern for another person (McCullough, Kilpatrick, Emmons, & Larson, 2001; Sheikh & Janoff-Bulman, 2010). Therefore, guilt is often characterized as a moral emotion, one that is linked to the welfare of society and that stimulates people to think of how one’s own behavior influences the well-being of other people (Haidt, 2003; A. Smith, 1759).

There is much empirical evidence for the notion of guilt as a moral and adaptive emotion. For example, guilt motivates a heightened sense of personal responsibility, compliance, and forgiveness and generates constructive strategies to cope with anger (Freedman et al., 1967; Izard, 1977; McCullough, Worthington, & Rachal, 1997; Strelan, 2007; Stuewig, Tangney, Heigel, & Harty, 2008; Tangney, Wagner, Fletcher, & Gramzow, 1992). Guilt is also strongly related to reparative intentions (Roseman, Wiest, & Swartz, 1994; Schmader & Lickel, 2006; Tangney, 1993; Tangney, Miller, Flicker, & Barlow, 1996; Zeelenberg & Breugelmans, 2008). These characteristics of guilt are quite similar across a wide array of cultures (Breugelmans & Poortinga, 2006; Fontaine et al., 2006), which is testimony to the universal moral character of this emotion.

Clear evidence for moral effects of guilt has been given by a recent series of studies on prosocial behavior in dyadic relationships. Ketelaar and Au (2003) showed that people acted more prosocially in social dilemma games after an autobiographical recall procedure inducing feelings of guilt or after making an unfair offer in an earlier round of the game. These findings were replicated by Nelissen, Dijk, and De Vries (2007), who found that an induction of guilt increased prosocial behavior whereas an induction of fear did not. De Hooge, Zeelenberg, and Breugelmans (2007) found similar results, reporting prosocial effects for guilt in a social dilemma as well as on a measure of everyday cooperation.

All together, guilt appears to be a moral emotion in the sense that it produces beneficial consequences for people in one’s social surroundings. We have strong reasons, however, to believe that associated with its prosocial corollary is a less social side of guilt. This is particularly relevant with respect to the moral interpersonal take on guilt. Mind that we do not question guilt to be moral in the sense that this emotion is concerned with the moral domain. Instead, we examine the status of guilt as being a morally good emotion. We propose that the not-so-social, darker side of guilt goes hand in hand with the positive side; it is a direct consequence of the focus on repairing the relationship with people one feels guilty toward.

### The Dark Side of Guilt

To understand the dark side of guilt, one must take a look at the nature of the emotion process. Most scholars today agree that emotions arise after an evaluation (an appraisal) of an event as relevant to one’s goals or concerns (Frijda, 1986). The appraisal not only determines which specific emotion is experienced but also affects which type of behavior follows (Ortony et al., 1988; C. A. Smith & Lazarus, 1993). Put differently, emotions can be fruitfully viewed as motivational processes that are instrumental to the goal

one is striving for (Zeelenberg, Nelissen, Breugelmans, & Pieters, 2008; Zeelenberg & Pieters, 2006). In the case of negative emotions (e.g., fear), when a personal concern (e.g., safety) is threatened, the emotion arises to signal this problem and focuses all attention on motivating behavior (e.g., climbing up a tree) that closes the gap between the present situation (e.g., being chased by a dog) and that personal concern of reaching safety. Because different problems need different solutions, different emotions will arise that in turn motivate different behaviors.

In the case of guilt, there is an appraisal signaling that one has done something wrong because one is responsible for harm done to another (close) person (Lewis, 1971; Zeelenberg & Breugelmans, 2008). So, the main personal concern in guilt is the negative impact of one’s actions on one’s relationships with a specific other. The ensuing action tendencies are aimed at restoring this dyadic relationship. In the words of Baumeister et al. (1994): “After doing something bad to another person, people are motivated to help that person or comply with that person’s wishes, apparently to rectify any inequity and to *repair any damage to the relationship*” (p. 260, emphasis added). In situations in which a person interacts with only the victim of his or her actions (i.e., dyadic situations), it is clear that guilt unambiguously produces moral behavior. After all, any compensatory behavior directly benefits the victim (and hence improves that specific social relationship).

Ironically, the same appraisals and action tendencies of guilt that benefit the outcomes of a victim may also lead to negative outcomes for other social partners in one’s social surroundings. When one experiences guilt, attention is temporarily focused on the hurt other: the victim. As a result, attention to the well-being of others is temporarily reduced. This means that when there is the opportunity to repair the damage done to the victim, this may occur at the expense of other social partners. For example, a man may experience guilt for having hurt his grandmother by forgetting her birthday. He may make up for this by spending more time with her, time he created by canceling appointments with others. Thus, we suggest that precisely because guilt induces a preoccupation with the victim, it also causes a (temporary) neglect of others, with negative consequences for their well-being. After all, a person can do only one thing at a time.

Our suggestion—that the strong focus on the victim that accompanies guilt may have negative consequences for other social partners—implies that a guilty state may not so much evoke a disregard for one’s personal concerns (as is often assumed) as evoke a neglect of the concerns of nonvictimized others. If we consider behavior in terms of resources (e.g., time, energy, money) and accept the fact that ultimately all resources are limited, then the benefits extended to one individual can be made only at the expense of another, be it oneself or other people. Moral behavior, then, can be defined as investments of resources in others at the expense of oneself (Penner et al., 2005). For example, moral behavior would be spending more time with a hurt loved one at the expense of one’s own time. Our point here is that guilt may lead to an extra investment in the relationship with the victim, but someone else will have to pay the bill for this. In line with this reasoning, we show that if we consider guilt-induced behavior beyond dyadic interactions between transgressor and victim, then the ostensibly moral behavior actually comes at the expense of others rather than the self.

According to equity perspectives such as interdependence theory (Kelley & Thibaut, 1978) and social value orientation theory (Messick & McClintock, 1968; Van Lange, Otten, De Bruin, & Joireman, 1997), people are naturally concerned with their personal outcomes but also with how their outcomes relate to those of other people. When experiencing guilt, people momentarily experience elevated concern for the outcome of the other person. This comes at the expense of their personal outcome, at least in dyadic situations. We think that when a third party is present, the usual concern for one's personal outcomes can be maintained along with a heightened concern for the outcome of the hurt other that is evoked by guilt. As was already suggested by Walster, Berscheid, and Walster (1970), when experiencing guilt "the harm doer is not only motivated by a desire for equity restoration, but also will act in such a way as to achieve the highest possible profit and satisfaction" (p. 190). One can restore the damaged relationship and still gain the highest possible profit by acting prosocially at the expense of other people around and not at the expense of oneself. This notion is best summarized by Freedman (1970), according to whom people who experience guilt "just do not like to suffer if they can possibly avoid it" (p. 159). This does not mean that people intentionally harm a third party but rather that their focus on the dyadic relationship may simply lead them to fail to notice the consequences of their behavior for other social partners. Our point is that when one feels guilt toward one person, one is simply less concerned with other people, and this may result in overlooking their concerns.

In a way, these predictions are reminiscent of findings reported by Batson and colleagues (1999, Batson, Klein, Highberger, & Shaw, 1995), who observed that inducing empathy increased prosocial behavior toward an individual in need at the expense of people's investments in the collective good in a multiple-player social dilemma game. The present research extends these findings in two important ways. First, we investigate the impact of guilt. Guilt and empathy are both moral emotions elicited by the concerns of another person. Feelings of guilt add an element of personal responsibility. Indeed, recent findings have shown that feelings of guilt are unique in the domain of social emotions in that they are elicited by violations of so-called perfect duties, or errors of commission (Zeelenberg & Breugelmans, 2008). In that sense, guilt increases our sense of obligation to live up to moral standards more so than does any other moral emotion.

Second, we do not investigate whether a person's concern for a particular other comes at the general expense of the collective good (to which the concerned person in a way also belongs) but rather whether it comes at the expense of another, clearly identified individual (and not the person expressing the concern). Harming a person whose identity is known to us is far more taxing than is behaving in a manner that merely violates principles of collective rationality (Jenni & Loewenstein, 1997). So, our research is consistent with that of Batson and colleagues (1999, 1995) in that we documented that prosocial behavior has target-specific and not general beneficial consequences. We add to that the prediction that if prosocial behavior is motivated by guilt, then it will come at the expense of identified others rather than the collective or even the personal good.

We think there are at least two reasons that these disadvantageous effects of guilt have never been documented before. First, guilt research has been limited to the study of either individual

experiences or dyadic interactions. In dyadic interactions, moral or prosocial behavior toward the other can come only at personal costs. Only in multiple-person situations is it possible to act prosocially toward the victim at the cost of others. The dyadic nature of previous studies did not allow for the finding of disadvantageous effects of guilt. Second, most studies showing positive effects of guilt have measured behavior or intentions in rather general terms without specifying an object, for example with rating scales such as "I wanted to make amends" or "I wanted to be forgiven" (Roseman et al., 1994; Tangney et al., 1996). Only when specifying objects is it possible to show that positive effects apply to only the relationship with the hurt person and not to the relationship with other social partners. Thus, previous studies simply did not allow for such effects to emerge.

### Studying the Negative Interpersonal Consequences of Guilt

There are two boundary conditions to the hypothesized negative interpersonal consequences of guilt. First, the negative interpersonal effects of guilt should be found with only so-called endogenous influences and not with exogenous influences. Influences of emotions on behavior can relate differently to current goal pursuit (Zeelenberg & Pieters, 2006). The endogenous influence of an emotion is an intrinsic part of the goal-setting and goal-striving process and is thus relevant for the decision at hand (Zeelenberg et al., 2008; Zeelenberg & Pieters, 2006). In other words, when the influence of guilt is endogenous, the hurt person is present and it is possible to act upon the goal and repair the damage. As a consequence, only endogenous guilt can result in a preoccupation with the victim and result in prosocial behavior toward the hurt person at the expense of others. In contrast, an exogenous influence of an emotion is external to the goal-setting and goal-striving process and is not related to current decisions. When the influence of guilt is exogenous, the hurt person is not present and it is not possible to focus exclusively on the victim. The goal of improving the hurt relationship will now be translated into a generic tendency for prosocial behavior, and negative interpersonal consequences for other social partners will not occur (cf. de Hooe et al., 2007; Ketelaar & Au, 2003; Nelissen et al., 2007).

Second, the negative interpersonal effects of guilt should be limited to a temporary effect in a single interaction. According to our prediction, experiences of guilt could result in violating the well-being of others in one's social surroundings. Following the logic of guilt appraisals, this could lead to an ongoing cycle of compensation to victims at the expense of others, who in turn need to be compensated at the expense of others, and so forth. Such cycles are not frequently observed in daily life, and we think that there are good reasons for why we should not expect them to be. Precisely because the negative interpersonal consequences of guilt occur due to a temporary neglect of others' well-being, people do not perceive their actions as harmful to other social partners. Due to the temporary neglect of the well-being of other social partners, no appraisals of doing harm are made and no feelings of "secondary guilt" are elicited.

To test our predictions we developed a situation in which participants interacted with two different partners—the victim and a nonvictim—at the same time. We used this design in a series of experiments to test how different guilt inductions influenced the



distribution of resources among two others and oneself. These situations can be best described as three-person dictator games. A dictator game is a type of social dilemma game that is often used to measure prosocial behavior (Camerer & Thaler, 1995; Kahneman, Knetsch, & Thaler, 1986). In a typical dictator game, one person decides how to divide a sum of money (or other resources) among oneself and another person without the other having any influence on the division of the resources. In our experiments, participants decided how to divide resources among themselves, the victim, and another person (the nonvictim), without the victim or the nonvictim having any influence on the division. We hypothesized that guilt would motivate prosocial behavior toward the victim at the expense of others around and hardly at the expense of oneself. More specifically, in all experiments we expected that, compared with a control condition, participants in guilt conditions would offer more resources to the victim and fewer resources to other social partners without changing the amount of resources for themselves. In addition, Experiments 1–4 systematically rule out alternative explanations of the effect and reveal conditions under which the effect is observed.

### Pilot Studies: Establishing Negative Consequences of Guilt

We initially conducted three pilot studies to test our central notion that guilt can motivate prosocial behavior in three-person situations with disadvantages for others.<sup>1</sup> We also wanted to verify that the unequal divisions following guilt are in fact thought of as immoral.

#### Pilot Study 1

Thirty-three inhabitants of Tilburg reported a personal experience of feeling guilty (guilt condition) or described a regular weekday (control condition; Ketelaar & Au, 2003). They were asked to think of the person they felt guilty toward (guilt condition) or of a person they had met during the weekday (control condition). This person was labeled Person A. Participants were asked to divide 50 euros among the birthday of Person A, a charity fund raising for victims of a flood in Africa, and themselves. As an emotion-manipulation check, they indicated how much guilt, shame, regret, disappointment, sadness, fear, anger, or dissatisfaction they felt on a scale ranging from 0 (*not at all*) to 10 (*very strongly*).

The manipulation of guilt was successful: Participants in the guilt condition ( $M = 8.13$ ,  $SD = 1.59$ ) reported more guilt than did participants in the control condition ( $M = 1.65$ ,  $SD = 2.29$ ),  $t(31) = 9.39$ ,  $p < .01$ , and more guilt than other emotions, all  $ts(15) > 2.12$ ,  $ps < .05$ . More importantly, guilty participants offered more money to Person A than did control participants,  $t(31) = 2.20$ ,  $p = .03$  (results for Pilot Studies 1 and 2 and Experiment 1 are displayed in Table 1). At the same time, guilt participants offered less money to flood victims than did control participants,  $t(31) = 2.00$ ,  $p = .05$ . Guilt and control participants did not differ in the amount they kept for themselves,  $t(31) = 0.47$ ,  $p = .64$ . These findings suggest that compensatory behavior toward the victim comes at the disadvantage of others and hardly at the disadvantage of oneself. Note that this effect occurred despite the obvious needs of the disadvantaged others (the flood victims).

#### Pilot Study 2

Pilot Study 2 explored whether guilty people also act disadvantageously toward identified others (Jenni & Loewenstein, 1997). Fifty-eight students were given the following instructions: *Imagine that you follow a course in which you have to take an exam and write a paper. You have already passed the exam. You write the paper together with your fellow student, Robert. In the guilt condition, participants then read the following:*

*Because you already passed your exam and because you do not feel like writing the paper, you hardly put any effort into it. Robert does almost all of the work. After handing in the paper it turns out that you both have received a very low mark because your own part was insufficient. Due to this low mark Robert does not pass the course and has to retake the subject next year.*

In the control condition, participants read this:

*After handing in the paper it turns out that you both received a good mark and passed the course because both your parts were sufficient.*

Participants then answered the emotion-manipulation check items and were asked to divide 50 euros among Robert, another fellow student Bob, and themselves.

Results showed that guilt participants ( $M = 8.19$ ,  $SD = 1.70$ ) reported more guilt than did control participants ( $M = 0.81$ ,  $SD = 1.39$ ),  $t(81) = 13.97$ ,  $p < .01$ . Guilt participants reported more guilt than other emotions, all  $ts(30) > 2.28$ ,  $ps < .05$ . More importantly, guilt participants offered more money to Robert than did control participants,  $t(81) = 3.20$ ,  $p < .01$ . In addition, they offered less money to Bob than did control participants,  $t(81) = 1.95$ ,  $p = .05$ . Guilt participants did not differ from control participants in the amount they kept for themselves,  $t(81) = 1.24$ ,  $p = .22$ . These results replicate the findings of Pilot Study 1 by

<sup>1</sup> Before conducting research on three-person situations, we focused on replicating the finding that guilt motivates prosocial behavior in dyadic situations. This finding has been shown in previous research but by means of slightly different research methods from those used in our experiments (de Hooge et al., 2007; Ketelaar & Au, 2003; Nelissen et al., 2007). A replication of the dyadic effects of guilt provided us with a baseline with which to compare the results of the pretests and the experiments that study guilt in multiple-person interactions. In this experiment, 62 participants were randomly assigned to the guilt or control condition. They were asked to read the scenario of Pilot Study 2 and subsequently answered the emotion-manipulation checks. Participants then read: "A day after the event you participate together with Robert in a study. The researcher gives you 50 euros and explains that you can decide what you want to do with this money. You can keep everything, or you can offer (a part) to Robert." As a dependent variable, participants indicated how they would divide the 50 euros. The results showed that the guilt manipulation was successful: Participants in the guilt condition ( $M = 9.09$ ,  $SD = 1.06$ ) reported significantly more guilt than did participants in the control condition ( $M = 0.48$ ,  $SD = 1.06$ ),  $t(60) = 32.25$ ,  $p < .01$ , and significantly more guilt than other emotions, all  $ts(31) > 3.37$ ,  $ps < .01$ . More importantly, guilt appeared to motivate higher offers to the hurt other (inevitably) at the expense of oneself. Participants in the guilt condition offered more money to Robert ( $M = 31.56$ ,  $SD = 10.43$ ) and, by definition, less money to themselves ( $M = 18.44$ ,  $SD = 10.43$ ) than did participants in the control condition ( $M = 23.83$ ,  $SD = 2.52$ , and  $M = 26.17$ ,  $SD = 2.52$ , for Robert and for themselves, respectively),  $t(60) = 3.95$ ,  $p < .01$ .

Table 1

*Prosocial Behavior as a Function of Emotion Condition in Pilot Studies 1 and 2 and in Experiment 1*

Person	Pilot Study 1		Pilot Study 2		Experiment 1		
	Guilt	Control	Guilt	Control	Guilt	Control	Victim
Victim	29.06 (8.41)	>	21.76 (10.45)	>	14.24 (5.62)	>	22.08 (5.30)
Nonvictim	9.38 (6.55)	<	14.71 (8.56)	<	11.33 (5.68)	<	19.38 (4.73)
Self	11.56 (10.76)	=	13.53 (12.96)	=	24.43 (9.34)	=	8.54 (9.15)
							21.40 (6.54)
							18.20 (5.38)
							10.40 (10.30)

*Note.* Data indicate mean division (and standard deviation) of 50 euros among the three persons, with higher scores indicating more prosocial behavior. There are no significant differences between means separated by an = sign (all  $t$ s < 1.60,  $p$ s > .12). Means separated by a > or < sign are significantly different (all  $t$ s > 2.00,  $p$ s < .05).

showing that even when the social surroundings consists of others that one personally meets, the costs of compensatory behavior befall those other people rather than oneself.

### Pilot Study 3

Even though giving resources to one person at the expense of others may technically constitute an immoral act, it could be the case that people do not perceive it as such. To verify that prosocial behavior at the expense of other social partners is indeed perceived as an immoral act, we ran Pilot Study 3, in which 53 participants were asked to evaluate the division situations of Pilot Studies 1 and 2. For every situation, participants were asked to indicate how an exemplary moral person would divide the 50 euros. Participants indicated that, in the division situation of Pilot Study 1, an exemplary moral person would offer more money to the flood victims ( $M = 24.43$ ,  $SD = 14.20$ ) than to the friend having a birthday ( $M = 16.32$ ,  $SD = 14.20$ ),  $t(52) = 2.86$ ,  $p < .01$ , and would keep the least for oneself ( $M = 9.25$ ,  $SD = 11.66$ ),  $t(52) = 4.53$ ,  $p < .01$ , compared with flood victims and  $t(52) = 3.41$ ,  $p < .01$ , compared with the friend having the birthday. In other words, moral behavior in this situation would also reflect an unequal division of the resources but then in the opposite direction compared with the effects observed in Pilot Study 1.

According to participants, in the division situation of Pilot Study 2 an exemplary moral person would divide the 50 euros equally among Robert ( $M = 16.20$ ,  $SD = 4.34$ ), fellow student Bob ( $M = 16.20$ ,  $SD = 4.34$ ), and oneself ( $M = 17.61$ ,  $SD = 8.68$ ),  $t(52) = 0.79$ ,  $p = .44$ , for comparison between money for Robert and money for oneself. These findings support our view that what we find for guilt is not considered to be moral behavior.

### Experiment 1: Excluding a General Victim Effect

The first question that arises is whether the negative consequences are the result of guilt feelings per se or of a victim being present. It could be possible that a victim in one's surroundings gives rise to distress, arousal, or other emotional states, which could by themselves be enough to have negative consequences for others in one's surroundings. To exclude this general victim effect, we conducted Experiment 1, where we added a condition in which a victim of another person's actions was present.

### Method

Seventy-four students at Erasmus University (42 women;  $M_{\text{age}} = 21.54$  years,  $SD = 2.15$ ) participated in partial fulfillment

of a course requirement. They were randomly assigned to the guilt, victim, or control condition and read the following scenario:

*Imagine you are in a hurry because you want to get a special offer at a shop just before closing time. You do not have any means of transportation but you know that your friend Jim has a bicycle. This bicycle is very special to him because it is the last present given to him by his grandmother before she died. Still, he lets you use the bicycle. You cycle to the shop and get the special offer.*

In the guilt condition, participants then read the following: *When you leave the shop you find out that the bicycle is stolen; you forgot to lock it. You inform Jim about this and he is very sad.*

In the control condition, participants read this: *When you leave the shop you take the bicycle and bring it back to Jim.*

In the victim condition, participants read the same scenario as in the control condition, with the following addition: *The next day Jim lends his bicycle to another friend and the bicycle gets stolen: The friend forgot to lock it. Jim is very sad.*

Participants first answered the emotion-manipulation-check items of Pilot Study 1. Next, all participants read and responded to the following:

*A week after the event are the birthdays of your friend Jim and of another friend, Michael. You have 50 euros that you can spend. How much money would you spend on the birthday of Jim and on the birthday of Michael, and how much money would you keep for yourself?*

After completing all tasks, participants were thanked and debriefed.

### Results and Discussion

**Emotion-manipulation check.** Guilt participants ( $M = 9.48$ ,  $SD = 0.92$ ) reported more guilt than did either victim participants ( $M = 2.60$ ,  $SD = 3.08$ ),  $t(71) = 10.12$ ,  $p < .01$ , or control participants ( $M = 3.63$ ,  $SD = 2.65$ ),  $t(71) = 8.53$ ,  $p < .01$ . Guilt participants reported more guilt than other emotions, all  $t$ s(24) > 2.69,  $p$ s < .05. The conditions did not differ on the other emotions.

**Monetary division.** The results supported our prediction: Guilt participants offered more money to Jim than did either victim participants,  $t(71) = 4.00$ ,  $p < .01$ , or control participants,  $t(71) = 3.59$ ,  $p < .01$ . Guilt participants also offered less money to Michael than did either victim participants,  $t(71) = 2.98$ ,  $p < .01$ , or control participants,  $t(71) = 3.78$ ,  $p < .01$ . Guilt participants did not differ from either victim participants or control participants in the amount they kept for themselves,  $t(71) = 1.19$ ,  $p = .24$ , and

$t(71) = 0.50, p = .62$ , respectively. Victim participants did not differ from control participants on any dependent variable, all  $ts(71) < 0.83, ps > .41$ . These results extend the findings of Pilot Studies 1 and 2 by showing that the negative consequences of guilt cannot be explained by a general victim effect. In situations where victims of other people's actions are present, one does not act prosocially toward the victim at the disadvantage of others around.

### Experiment 2: Effect of Guilt When the Victim Is Present or Absent

Our prediction concerning the consequences of guilt beyond the transgressor-victim dyad rests on the assumption that the preoccupation with the victim that characterizes guilt causes disadvantageous side effects for the social environment. This entails that no such effects of guilt should be found for exogenous influences of guilt (i.e., in situations where the victim is not present). This was tested in Experiment 2. We expected to find the disadvantageous effects of guilt for other social partners only in the condition where the victim was present (endogenous influences) and not in the condition where the victim was not present (exogenous influences) or in the control condition (no guilt). In addition, Experiment 2 contained a lab induction of guilt and a behavioral measure.

### Method

**Participants and design.** A total of 143 Tilburg University students (120 women;  $M_{\text{age}} = 20.12, SD = 4.14$ ) participated in partial fulfillment of a course requirement. They were randomly assigned to the conditions of a 2 (emotion condition: guilt vs. control)  $\times$  2 (victim presence: present vs. not present) between-subjects design with lottery ticket division as the dependent variable.

**Procedure and variables.** Participants entered the laboratory in groups of nine to 12 and were seated in separate cubicles. They were told that during the session they would be engaged in different tasks in which they could earn lottery tickets. During these tasks, they would be paired with other participants through their computers. At the end of the session, one of the participants would win 10 euros in the lottery.

The session started with a performance task. Participants played two rounds of a letter task, ostensibly with another participant (adopted from Reitsma-Van Rooijen, Semin, & Van Leeuwen, 2007). In this task, letters would appear rapidly on the screen in either a red or green color. To earn points, participants had to respond to green letters before they disappeared from the screen by pressing the corresponding letter on the keyboard. If the letter was red, the other player could earn points in a similar fashion. After 3 min, their total scores would be calculated and feedback would be given. Participants were instructed that they would play two rounds. In the first round they could earn a bonus of eight lottery tickets for themselves, and in the second round they could earn eight lottery tickets for the other player. Importantly, both players needed to do well in order to reach the minimum level of 100 points to get the bonus.

After playing the first round of the letter task, all participants received bogus feedback that they earned the bonus due to the good performance of both themselves and the other player. Participants subsequently played the second round of the letter task

and received feedback about the other player's bonus. In the guilt condition, the other player did not receive the bonus, due to the participant's bad performance. In the control condition, the other player received the bonus, due to good performance of both the participant and the other player.

Participants continued with a three-person dictator game, either with the player from the letter task (victim-present condition) or with a participant who knew nothing about the letter task (victim-not-present condition). Because this person differed between the victim-present and victim-not-present conditions, we labeled this person Person A. In all conditions the third player was a participant who knew nothing about the letter task. It was explained that one of them would be given either nine or 12 lottery tickets, which could be divided among the three players. Participants were given 12 tickets to divide and were told that the other two participants did not know whether there were nine or 12 tickets to divide (adopted from van Dijk & Vermunt, 2000). The other two participants' lack of knowledge about the number of tickets to divide presented the participant with an opportunity to unequally divide the tickets without appearing unfair. The numbers of tickets offered to Person A, to the third player, and to oneself were our dependent measures.

As a manipulation check, participants subsequently answered the emotion questions of Pilot Study 1 and indicated on a scale ranging from 0 (*not at all*) to 10 (*very strongly*) how responsible they felt, how much they felt that what they had done was wrong, how much they thought about what they had done to the other person, how much they wanted to repair what had happened, and how much they wanted to be forgiven after the letter task. These represent basic elements of guilt (Breugelmans & Poortinga, 2006; Roseman et al., 1994; Tangney & Fischer, 1995; Tangney et al., 1996). Finally, all participants were thanked and thoroughly debriefed.

### Results and Discussion

**Emotion-manipulation check.** None of the participants had guessed the goal of the study, and all participants believed the feedback received during the letter task. Guilt participants scored higher on all guilt elements than did control participants, all  $ts(141) > 7.13, ps < .01$ , with the exception of felt responsibility,  $t(141) = 0.37, p = .72$ . They also reported more guilt ( $M = 7.46, SD = 1.99$ ) than did control participants ( $M = 0.23, SD = 0.76$ ),  $t(141) = 28.92, p < .01$ , and more guilt than other emotions, all  $ts(69) > 3.94, ps < .01$ . There were no differences for the other emotions.

**Ticket division.** The results of Experiment 2 can be found in Table 2. We found that participants in the victim-present guilt condition offered more tickets to Person A (the victim) and fewer tickets to the third player than in the victim-present control and in the victim-not-present guilt condition (see Table 2). A 2 (emotion condition)  $\times$  2 (victim presence) analysis of variance (ANOVA) with tickets offered to Person A as dependent variable showed significant main effects of emotion condition,  $F(1, 139) = 15.49, p < .01$ , and of victim presence,  $F(1, 139) = 11.94, p < .01$ . More importantly, there was a significant two-way interaction,  $F(1, 139) = 3.72, p = .05$ . Participants in the victim-present guilt condition offered significantly more to Person A than did participants in the victim-present control condition,  $t(139) = 4.12, p < .01$ .

Table 2

*Division of Lottery Tickets as a Function of Emotion Condition and Presence of the Hurt Other in Experiment 2*

Presence of hurt other	Guilt		Control
Present			
Victim	4.85 (1.89)	>	3.63 (1.13)
Nonvictim	2.82 (1.33)	<	3.50 (1.27)
Self	4.33 (2.06)	=	4.87 (2.34)
Not present			
Victim	3.73 (0.77)	=	3.31 (0.96)
Nonvictim	3.73 (0.77)	=	3.29 (0.99)
Self	4.54 (1.54)	= / <	5.40 (1.93)

*Note.* Data indicate mean (and standard deviation) division of 12 lottery tickets among the three persons. There are no significant differences between means separated by an = sign (all  $t$ s < 1.51,  $p$ s > .14). Means separated by an = / < sign are marginally significantly different ( $t = 1.83$ ,  $p = .07$ ), and means separated by a > or < sign are significantly different (both  $t$ s > 2.21,  $p$ s < .05).

.01, and then did participants in the victim-not-present guilt condition,  $t(139) = 3.77$ ,  $p < .01$ . There was no difference between the victim-not-present guilt condition and victim-not-present control condition,  $t(139) = 1.42$ ,  $p = .16$ .

The higher amount for Person A had detrimental effects for the third player. A 2 (emotion condition)  $\times$  2 (victim presence) ANOVA with tickets offered to the third player as the dependent variable showed no significant main effects but did show a significant two-way interaction,  $F(1, 139) = 9.19$ ,  $p < .01$ . Participants in the victim-present guilt condition offered significantly less to the third player than did participants in the victim-present control condition,  $t(139) = 2.59$ ,  $p = .01$ , and then did participants in the victim-not-present guilt condition,  $t(139) = 3.43$ ,  $p < .01$ . There was no reliable difference between the victim-not-present guilt condition and victim-not-present control condition,  $t(139) = 1.70$ ,  $p = .09$ .

Higher offers to Person A did not come at personal expense. A 2 (emotion condition)  $\times$  2 (victim presence) ANOVA with tickets kept for oneself as the dependent variable showed no significant main effects and no significant two-way interaction,  $F(1, 139) = 0.23$ ,  $p = .63$ . Participants in the victim-present guilt condition kept the same number of tickets as did participants in the victim-present control condition,  $t(139) = 1.13$ ,  $p = .26$ , and as did participants in the victim-not-present guilt condition,  $t(139) = 0.44$ ,  $p = .66$ . There was a marginally significant difference between the victim-not-present guilt condition and victim-not-present control condition,  $t(139) = 1.83$ ,  $p = .07$ , such that guilty participants kept somewhat less for themselves.

To summarize, we replicated the findings of Experiment 1 in a study employing a lab induction of guilt and a behavioral measure. Guilt motivates prosocial behavior toward the victim with negative consequences for other social partners. Importantly, the findings of Experiment 2 also reveal that the effects are most likely the consequences of a preoccupation with the victim because they occur only for endogenous influences of guilt, when the victim of participants' actions is present, and not for exogenous influences of guilt.

### Experiment 3: Costs for Others Over Time

According to our predictions, guilt motivates prosocial behavior toward the victim with disadvantageous outcomes for others in one's surroundings. These predictions have been supported by the pilot studies and Experiments 1 and 2. However, one could argue that giving less does not equate to negative consequences. Participants in Experiments 1 and 2 still offered some money to the third social partner, and even though this amount of money was lower than what one would usually give, it could be interpreted as socially desirable behavior. To corroborate our claim that guilt leads to negative outcomes for other social partners, we conducted Experiment 3, where prosocial behavior toward the victim could occur only by actively taking away resources from oneself or others (redistributing outcomes instead of distributing them).

In addition, it could be suggested that allocating one's resources is an ongoing calculation that evolves over time. In other words, it is possible that directly after a transgression one could make up with the victim at the disadvantage of others around but that later on one could make up with the others who were disadvantaged earlier on. To exclude this possibility we added a dependent variable to Experiment 3, so that it would be possible to study the behavior of transgressors over time.

### Method

Forty-four Erasmus University students (26 women;  $M_{\text{age}} = 21.32$ ,  $SD = 1.61$ ) participated in partial fulfillment of a course requirement and were randomly assigned to the guilt or control condition. They entered the lab and did the letter task of Experiment 2. To make the guilt and control conditions as similar as possible, we changed the feedback in the control condition to the following: Participants earned the bonus of eight lottery tickets, but their fellow players did not earn the bonus of eight lottery tickets, due to the fellow players' own bad performance. So the outcomes in the guilt and control conditions were exactly the same, but the person responsible for these outcomes differed. Participants then again answered the emotion-manipulation-check items.

Participants continued with a three-person game together with the player from the letter task (Person A) and with a participant who knew nothing about the letter task (third player). All participants received an overview of the earned lottery tickets and saw that the participant and the third player had earned eight tickets, whereas Person A had no tickets. It was explained that one of them would be given a chance to redistribute the tickets as he or she wished and that the others would have no influence on this redistribution. Participants were ostensibly selected at random to redistribute the tickets and were told that it was not possible to take any tickets from Person A (because Person A did not have any tickets). Participants could take any number of tickets from themselves to give to Person A or to the third player and then could take any number of tickets from the third player to give to Person A or to themselves. The number of tickets taken from oneself for Person A and taken from the third player for Person A formed our first set of dependent measures.

After the redistribution, participants played the three-person dictator game of Experiment 2. The number of tickets offered to Person A, to the third player, and to oneself formed our second set of dependent measures. Participants subsequently answered ques-



tions concerning their motivation for dividing the tickets the way they did on a scale ranging from 0 (*not at all*) to 10 (*very strongly*). To cover the goal of the study, we mingled the motivations of interest with other, unrelated motivation items. These motivations included “I wanted to improve the situation for the third player,” “The outcomes of the third player were (temporarily) unimportant,” “I wanted to make up with Person A,” and “I wanted to have as much as possible for both myself and Person A.” Finally, participants wrote down their opinion concerning the study and what they thought the goal of the study was. At the end of the study, participants were thanked and thoroughly debriefed.

## Results and Discussion

**Emotion-manipulation check.** The manipulation checks showed that our manipulation of guilt was successful. None of the participants guessed the goal of the study, and all participants believed the feedback from the letter task. In addition, guilt participants scored higher on all guilt elements than did control participants, all  $t(42) > 2.04$ ,  $ps < .05$ . They also reported more guilt ( $M = 6.86$ ,  $SD = 2.23$ ) than did control participants ( $M = 1.64$ ,  $SD = 1.76$ ),  $t(42) = 8.63$ ,  $p < .01$ , and more guilt than other emotions, all  $t(21) > 3.99$ ,  $ps < .01$ . There were no differences for the other emotions.

**Redistributing tickets (first round).** Guilt participants took more tickets from themselves for Person A ( $M = 2.18$ ,  $SD = 1.53$ ) than did control participants ( $M = 1.05$ ,  $SD = 1.36$ ),  $t(42) = 2.60$ ,  $p = .01$ . They also took more tickets from the third player for Person A ( $M = 4.23$ ,  $SD = 2.58$ ) than did control participants ( $M = 2.50$ ,  $SD = 2.56$ ),  $t(42) = 2.23$ ,  $p = .03$ . More importantly, guilt participants took more tickets from the third player than from themselves,  $t(21) = 2.79$ ,  $p = .01$ .

**Distributing tickets (second round).** Guilt participants did not show any reparative behavior toward the victim or the third party during the second round of ticket divisions (the three-person dictator game). Guilt participants offered the same amount of tickets to Person A ( $M = 2.41$ ,  $SD = 1.68$ ) as did control participants ( $M = 2.23$ ,  $SD = 1.51$ ),  $t(42) = 0.38$ ,  $p = .71$ , and the same amount to the third player ( $M = 1.95$ ,  $SD = 1.59$ ) as did control participants ( $M = 2.23$ ,  $SD = 1.34$ ),  $t(42) = 0.62$ ,  $p = .54$ . They also kept the same amount of tickets for themselves ( $M = 7.64$ ,  $SD = 2.90$ , for guilt and  $M = 7.55$ ,  $SD = 2.76$ , for control),  $t(42) = 0.11$ ,  $p = .92$ .

**Motivations.** Results on the motivations showed that guilt temporarily decreased interest in the well-being of others in order to repair the damage done to a victim. Guilt participants wanted to improve the situation for the third player less ( $M = 3.14$ ,  $SD = 1.98$ ) than did control participants ( $M = 4.45$ ,  $SD = 2.04$ ),  $t(42) = 2.17$ ,  $p = .04$ , and were more convinced that the outcomes for the third player were unimportant ( $M = 5.96$ ,  $SD = 2.79$ ) than were control participants ( $M = 4.18$ ,  $SD = 2.59$ ),  $t(42) = 2.19$ ,  $p = .03$ . Guilt participants wanted to repair the situation for Person A more ( $M = 5.96$ ,  $SD = 2.97$ ) than did control participants ( $M = 2.91$ ,  $SD = 2.45$ ),  $t(42) = 3.71$ ,  $p < .01$ , and were more willing to have as much as possible for themselves and Person A ( $M = 4.46$ ,  $SD = 2.92$ ) than were control participants, ( $M = 2.91$ ,  $SD = 2.33$ ),  $t(42) = 1.94$ ,  $p = .06$ .

The results of Experiment 3 reveal that in addition to motivating less socially desirable behavior, guilt can also cause one to divert

resources from other social partners. Participants experiencing guilt took resources from another person in order to make up with the victim. It is important to note that this behavior did not reflect equity relationships that would be repaired over time; when participants were later on offered the possibility to repair the damage to the people that they had taken resources from, they did not act more prosocially.

## Experiment 4: Negative Emotions and Time Divisions

According to our premise, the negative effects for one's social surroundings are the result of specific elements of guilt and not of negative emotions in general. To test this prediction, we conducted a study in which we included another negative emotion, namely shame. Shame as a moral emotion is related to guilt. For example, shame typically arises after a moral transgression or incompetence (Keltner & Buswell, 1996) and gives rise to a focus on the damaged view of the self: feelings of worthlessness and inferiority (Ausubel, 1955; Tangney et al., 1992). In addition, shame has been empirically shown to motivate prosocial behavior toward the audience of one's shame event, which suggests that in the present experiment shame may motivate tendencies to spend time with the audience or victim of one's shameful actions (de Hooe, Breugelmans, & Zeelenberg, 2008). However, shame also differs from guilt in various aspects (see e.g., de Hooe et al., 2007; Tangney & Dearing, 2002). Most important for the current study is that shame does not share with guilt the strong focus on the victim of one's actions. This means that, if our analysis is correct, the negative interpersonal effects should be found for guilt but not for shame. Mind that we do not want to suggest that the effects for shame will reflect effects of general negative affect. We chose to compare guilt with shame because this is a conservative test of our hypothesis. Next to the comparison with shame, Experiment 4 tested whether the negative effects of guilt are found only with limited resources, such as money or lottery tickets, or also with a less restricted resource, such as time. An extension of our findings to less clearly limited resources would support the robustness and generalizability of the effect.

## Method

Seventy Erasmus University students (30 women;  $M_{\text{age}} = 21.41$ ,  $SD = 1.75$ ) participated in partial fulfillment of a course requirement. They were randomly assigned to the guilt, shame, or control condition. They completed a similar autobiographical recall procedure as in Pilot Study 1 and then answered the emotion-manipulation checks. Participants thought of either a person they felt guilty toward (guilt condition), a person they felt ashamed toward (shame condition), or a person they had met on a weekday (control condition). This person was labeled Person A. Participants then read the following:

*Directly after the experience that you described, Person A asks you whether you have time to meet next Sunday. That Sunday, however, you had already agreed to meet with a friend, Robin, and to study for your exam next Monday. What would you do? Cancel the appointment with Robin, cancel your plans to study, or say no to Person A?*

Participants indicated what they would choose. Next, they indicated in hours how much time they would spend on every appointment. Participants then read this:

*The week following that Sunday is filled with exams. Hence you planned to do something nice on the Saturday after the exams. However, during that week Person A asks you whether you would like to do something nice together that Saturday. In addition, Robin asks you whether you would like to do something nice together that Saturday. What would you do that Saturday? Would you do something nice by yourself, make an appointment with Person A, or make an appointment with Robin?*

Participants indicated what option they would choose and in hours how much time they would spend on every appointment. After completion of all tasks, participants were thanked and debriefed.

## Results and Discussion

**Emotion-manipulation check.** The manipulation checks showed that our manipulation of guilt and shame was successful. Guilt participants ( $M = 8.77$ ,  $SD = 1.23$ ) reported more guilt than did either shame participants ( $M = 6.81$ ,  $SD = 3.32$ ),  $t(67) = 2.61$ ,  $p = .01$ , or control participants ( $M = 1.91$ ,  $SD = 2.64$ ),  $t(67) = 8.75$ ,  $p < .01$ . Guilt participants reported more guilt than other emotions, all  $ts(21) > 4.17$ ,  $ps < .01$ . Shame participants ( $M = 8.38$ ,  $SD = 1.44$ ) reported more shame than did either guilt participants ( $M = 7.18$ ,  $SD = 2.38$ ),  $t(67) = 1.97$ ,  $p < .05$ , or control participants ( $M = 1.91$ ,  $SD = 2.46$ ),  $t(67) = 10.58$ ,  $p < .01$ . Shame participants reported more shame than other emotions, all  $ts(21) > 2.76$ ,  $ps < .01$ . The conditions did not differ on the other emotions.

**Time division.** The results of Experiment 4 can be found in Table 3. Whereas the majority of shame participants (81%) and control participants (86%) would say no to Person A, the majority of guilt participants (64%) would cancel the appointment with Robin in order to meet Person A,  $\chi^2(4, N = 70) = 27.21$ ,  $p < .01$ . Only one person in the guilt condition would meet Person A at the expense of own study time. The division of hours also showed that guilt participants were willing to spend more time with Person A

at the disadvantage of Robin and not at the disadvantage of oneself: Guilt participants spent more hours with Person A than did either shame participants,  $t(67) = 4.18$ ,  $p < .01$ , or control participants,  $t(67) = 4.59$ ,  $p < .01$ . Guilt participants spent less hours with Robin than did either shame participants,  $t(67) = 3.62$ ,  $p < .01$ , or control participants,  $t(67) = 2.52$ ,  $p = .01$ . Guilt participants did not differ from shame participants or from control participants in the hours they kept to themselves,  $t(67) = 0.23$ ,  $p = .82$ , and  $t(67) = 0.09$ ,  $p = .93$ , respectively. Shame participants did not differ from control participants on all dependent variables, all  $ts(67) < 0.99$ ,  $ps > .32$ .

**Second round of time division.** Guilt participants did not show any reparative behavior toward the victim or the third party during the second possibility of time division. In all three conditions, the majority (guilt 50%, shame 69%, and control 50%) would make an appointment with Person A for the next Saturday, and a quarter would do something nice by themselves (guilt 27%, shame 23%, and control 23%),  $\chi^2(4, N = 70) = 3.94$ ,  $p = .42$ . When being asked how they would divide their time that Saturday, guilt participants would spend the same amount of time with Person A ( $M = 3.30$ ,  $SD = 2.63$ ) as would either shame participants ( $M = 3.41$ ,  $SD = 1.75$ ),  $t(67) = 0.14$ ,  $p = .89$ , or control participants ( $M = 3.77$ ,  $SD = 3.93$ ),  $t(67) = 0.56$ ,  $p = .58$ . They also would spend the same amount of time with Robin ( $M = 2.25$ ,  $SD = 2.18$ ) as would either shame participants ( $M = 1.80$ ,  $SD = 1.81$ ),  $t(67) = 0.78$ ,  $p = .44$ , or control participants ( $M = 1.64$ ,  $SD = 2.06$ ),  $t(67) = 1.01$ ,  $p = .32$ . Finally, in all conditions participants would spend the same amount of time on doing something nice on their own ( $M = 3.77$ ,  $SD = 5.14$ , for guilt;  $M = 3.68$ ,  $SD = 2.31$ , for shame; and  $M = 2.82$ ,  $SD = 2.13$ , for control),  $t(67) = 0.09$ ,  $p = .93$ , and  $t(67) = 0.93$ ,  $p = .36$ , respectively. In summary, the negative effects for others in one's surroundings are the result of guilt and not of general negative affect. Indeed, the same effects were not found for a very similar negative emotion, namely shame. These effects do not only con-

Table 3  
Time Division as a Function of Emotion Condition in Experiment 4

Moment of division and action taken	Guilt		Control		Shame
1st time in %					
No to victim	32	<	86	=	81
Cancel nonvictim	64	>	5	=	8
Cancel self	4.5	=	9	=	11
1st time in $M$ ( $SD$ ) hr					
Meet victim	3.25 (2.65)	>	0.64 (1.26)	=	0.96 (1.53)
Meet nonvictim	1.11 (1.31)	<	2.34 (1.95)	=	2.81 (1.54)
Study for oneself	5.45 (3.40)	=	5.55 (3.19)	=	5.69 (3.90)
2nd time in %					
Meet victim	50	=	50	=	69
Meet nonvictim	23	=	27	=	8
By oneself	27	=	23	=	23
2nd time in $M$ ( $SD$ ) hr					
Meet victim	3.30 (2.63)	=	3.77 (3.93)	=	3.41 (1.75)
Meet nonvictim	2.25 (2.18)	=	1.64 (2.06)	=	1.80 (1.81)
By oneself	3.77 (5.14)	=	2.82 (2.13)	=	3.68 (2.31)

*Note.* Time division in percentages reflects the number of participants who chose that option. Time division in hours reflects the number of hours given to that option. There are no significant differences between means separated by an = sign (all  $\chi^2$ s < 3.47,  $ps > .18$ ; all  $ts < 1.01$ ,  $ps > .32$ ). Means separated by a > or < sign are significantly different (all  $\chi^2$ s > 17.14,  $ps < .01$ ; all  $ts > 2.52$ ,  $ps < .05$ ).

cern divisions of limited resources such as money but can also appear when making appointments and dividing unlimited resources such as one's time.

### General Discussion

It appears that guilt, one of the more prominent moral emotions, can motivate behavior that does not quite fit the predicate moral. For sure, guilt is a positive and adaptive emotion in the sense that it motivates prosocial behavior toward the victim, which may restore a damaged relationship. However, the same emotion can lead to such a preoccupation with repairing the harm done to the victim that it makes people temporarily forget the well-being of others in their social surroundings. As a consequence, they may repair one relationship at the expense of another.

With different inductions and different dependent measures, we repeatedly found that guilt repairs the hurt relationship at the expense of others and not or hardly at the expense of oneself. We first established that people offered more money to the hurt other at the disadvantage of unknown others who needed the money and not at the expense of oneself. Similar results were obtained when extending this situation to an interaction with identified others (Pilot Study 2). This finding could not be explained by a general victim effect, because it did not happen in situations where a victim of other people's actions was present (Experiment 1). In addition, Experiment 2 showed that, after experiencing guilt in the lab, participants ignored the well-being of other social partners only in situations where it was possible to repair the damage (endogenous influences) and not in situations where the other was not present (exogenous influences). Even when repair was formulated in terms of taking away resources of others, guilt motivated prosocial behavior at the disadvantage of other social partners and did not motivate reparative behavior toward those hurt others over time (Experiment 3). Finally, Experiment 4 showed that the effect was specific for the emotion guilt and also happened with unlimited resources such as time. Thus, it seems safe to conclude that there is ample evidence in favor of the view that guilt does have negative interpersonal consequences.

It is important to stress that our notion of the negative interpersonal effects of guilt is consistent with common views of this emotion, including the notion of guilt as a moral emotion. Within the boundaries of the relation between transgressor and victim, guilt can clearly be qualified as moral. Beyond the boundaries of the relation between transgressor and victim, it is harder to unequivocally qualify guilt as a moral emotion. One may argue that whether an emotion like guilt constitutes a moral emotion is actually context-dependent rather than an intrinsic element of the emotion itself. We feel that this is an important issue because the qualification of an emotion as a moral emotion may easily lead to the impression that it is always good for interpersonal relationships. Our research shows that such an impression would be mistaken and underlines the necessity of a thorough analysis of the phenomenology and function of emotions in order to understand their effects on behavior (Zeelenberg et al., 2008).

All in all, we believe that the extension of the effects of guilt to multiple-person interactions has broadened our view of the way that emotions can affect social behavior in two ways. First, most, if not all, research concerning the behavioral effects of specific emotions makes use of situations in which the person is alone or

there is an interaction between just two people (see e.g., Lerner & Keltner, 2001; Parks, Rumble, & Posey, 2002; van Kleef, De Dreu, & Manstead, 2004). This research on dyadic situations has provided a clear but not necessarily comprehensive picture of how emotions function. For instance, we showed that guilt clearly emerges as a prosocial emotion in dyadic situations but appears to be less so in three-person situations. This suggests that a wider range of behavioral responses to emotions may be uncovered if we start looking beyond dyadic interactions. As stated, the qualification of emotions as being social or moral may even change when behavioral consequences are studied in a broader setting.

Second, in the same way that studying emotions in dyadic or multiple-person situations can have an important bearing on our understanding of emotion-induced behavior, moving from exogenous to endogenous influences of emotion can uncover new and unexpected results. For example, de Hooge et al. (2008) revealed that, when studied endogenously, shame had important prosocial consequences that had hitherto been overlooked in the literature. Studies of exogenous influences of emotions provide many interesting insights in spillover effects of emotions and show us how emotions influence behaviors in ways that should logically not occur. However, they can say little about the function of an emotion. Studies of endogenous influences describe what the emotion signals to the decision maker and, as such, do give insights on the function of an emotion. Importantly, exogenous and endogenous influences of a single emotion may give rise to completely different behaviors, as seen in the present research. When researchers are not aware of these distinct influences, different behaviors may cause confusion about the nature and function of an emotion.

It is interesting that the current findings show that the negative consequences of guilt are not repaired or changed later on. The results of the present experiments show that one's social interactions with a victim can produce new victims when one attempts to restore the relationship with the original victim. These findings immediately give rise to the question concerning how people deal with this second victim. One might suggest that the reparative behavior following from guilt may produce an unending chain of reparative behaviors necessary to restore the relationships with one's victims. In contrast, Experiments 3 and 4 showed that, in a second round of dividing resources, participants did not act reparatively toward the victims created in the first round of divisions. This suggests that people do not plan ahead or keep in mind the temporary inequity in order to make reparations for all the harmful actions later on. In other words, when behaving in accordance with previous actions, people are able to ignore the consequences of their current behaviors for the well-being of others in one's social surroundings.

We would like to make two closing remarks concerning our studies. First, the reader may notice that the amounts of resources given to the victim, the third person, and kept for oneself may fluctuate over experiments. These fluctuations may appear because our different experiments used different settings, groups of participants, emotion inductions, and tasks. We regard it as telling that despite these differences, our main finding that guilt motivates more prosocial behavior toward the victim at the disadvantage of third parties and hardly of oneself is consistent over all experiments.



The second remark concerns an alternative explanation for our findings. Recent research has suggested that people may perceive the undoing of an action that has hurt other people as more moral than the inaction of not helping people whom they have not harmed (Greene et al., 2009). As a consequence, one might predict in our experiments that the action of having hurt a victim may motivate prosocial behavior, whereas the inaction toward other social partners may be seen as a lesser immorality and thus may have negative consequences for them. Although this explanation sounds reasonable, it could not explain the findings of Experiments 3 and 4. After offering more resources to the victim and fewer resources to the third social partner in the first round, an immoral action has taken place toward the third social partner. This would suggest that moral behavior aimed at restoring the action toward the third social partner should be addressed in the second round. In contrast, the findings in both Experiments 3 and 4 reveal that participants did not show any reparative behavior toward the third social partner in the second round. Therefore, we think that the present data exclude this alternative explanation and suggest that guilt has led to a temporary neglect of the well-being of other social partners.

Having demonstrated the negative interpersonal side of guilt, how should we now evaluate its status as a moral emotion? The finding that guilt is not always positive for one's social environment does not imply that we should do away with the predicate moral. On the contrary, our studies confirm the view of guilt as a commitment device that inhibits selfish tendencies in favor of behaviors that benefit people who have been wronged by one's actions. In this sense, guilt clearly is a moral emotion. However, the finding that guilt can also produce disadvantageous side effects for nonvictimized others makes clear that moral emotions do not make people indiscriminately neglect their self-interest. In our view, it is therefore not the emotion itself that should be qualified as moral but rather its behavioral consequences. A thorough understanding of the phenomenology of emotion and its associated motivational functions is required to specify the conditions under which particular behavioral consequences—moral or otherwise—will be observed. Thus, it should not come as a surprise that even the most exemplary of moral emotions comes with a dark side.

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